

Section 8-1: Ratios & Unit Rates

Today's Objectives:

- 1. Define "ratio" and "unit rate."**
- 2. Write ratios using fractions, colons, and in words.**
- 3. Find rates and unit rates.**

Ratio

A comparison between two quantities.

3 ways to write a ratio

1. Fraction $\frac{2}{3}$

2. Colon 2:3

3. In words 2 to 3

*** Always simplify the fractions ***

*** Do NOT use mixed #'s ***

Part
of girls: 15

of boys: 9 Part

of students: 24 whole

Ex. 1: Write the ratio of # of girls
to the # of boys.

Part
to
Part
Comparison

1. $\frac{15 \div 3}{9 \div 3} = \frac{5}{3}$
2. 15:9
3. 15 to 9

of girls: 15

of boys: 9

of students: 24

Ex. 2: Write the ratio of **# of boys**
to the **# of students**.

Part
to
Whole
Comparison

1. $\frac{9}{24} \div 3 = \frac{3}{8}$
2. 9:24
3. 9 to 24

Unit Rate

The ratio of 2 quantities where the denominator is 1.

- *Get a 1 on the bottom
(divide by the denominator)
- *Include labels!

Ex. 3: Find the unit rate.

11 miles in 20 minutes

Step 1: Write the ratio using a fraction

$$\frac{11}{20}$$

**Step 2: Do the division
(divide by denominator)**

$$11 \div 20 = 0.55$$

**Step 3: Include the units,
use "per" or /**

or 0.55 miles per minute

0.55 miles/minute